

# Effects of Space Environment on Materials

## –An Overview

Bernardo C. Lopez

Jet Propulsion Laboratory, California Institute of Technology

### Abstract

The effect that the space environment has on the various materials used for space applications has always received great attention in the development of space-borne systems. More recently, the use of new materials in the development of new technologies, is motivating investigations and experiments on such materials to determine their viability in space. Also, with the deployment of the space station and the needs associated with greater exposure of humans to the near-Earth space environment, a renewed visit to the effects of space environment on materials is required.

This oral presentation provides an overview of the space environment, the issues and concerns that arise when considering the interaction between said environment and the variety of material used for space.

The topics being presented are the result of work conducted for the development of Gossamer Structures. However, none of the material being presented contains information not in the public domain, and no disclosure of any proprietary, confidential or competition-sensitive information will be made.